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WISCONSIN FOREST PEST SITUATION REPORT - 1992

Butternut Canker: *Sirococcus clavigigneti-juglandacearum* Nair, Kostichka and Kuntz

A statewide survey for butternut canker was conducted with the following objectives: determine the incidence and severity of butternut canker by various size classes in known areas of infestation and previously unreported areas; determine whether or not butternut is reproducing in seed or stump sprout form. Eighty-two locations were visited and at each location, all butternuts within a one-acre plot were evaluated for disease incidence and severity; the presence and health of butternut reproduction was also noted. At each site, an additional survey was conducted by walking the property for 1 hour or until 25 butternuts were observed and evaluated. A total of 1,648 butternuts were evaluated during 1992. Only 11 percent of the live trees had no signs of canker. Cankered butternuts were observed in 18 previously unreported counties; confirmation via isolation of *S. clavigigneti-juglandacearum* was obtained for 12 of the 18 counties. Regeneration was encountered only occasionally and primarily in disturbed areas such as road ways, pastured fields, trail edges, heavily logged woods and pond shorelines. Only 3% of all trees surveyed had any sprouts present. The data is currently being analyzed and a full report is planned for completion in March, 1993.

Chestnut Blight: *Cryphonectria parasitica* (Murr.) Barr

Survey and disease management efforts were concentrated on a 60-acre American chestnut stand in LaCrosse County where chestnut blight was first observed in 1987. This stand has approximately 2,500 American chestnuts >2" in diameter. Twenty-three trees are currently cankered and a total of 57 cankers are present in the stand. In June, 54 cankers were inoculated with the hypovirulent form of the virulent isolate present in the LaCrosse stand. Inoculations were conducted by removing the bark from the face and margins of the cankers then placing a slurry of hypovirulent *C. parasitica* into small holes along the margin of the cankers. The holes were made with a leather punch. In October, all inoculated cankers were evaluated for the presence of callus tissue. Callus tissue has formed on all inoculated cankers to varying degrees. This stand will be resurveyed during the winter of 1992-'93 for the presence of new cankers. Inoculation of new cankers with the hypovirulent strain is planned for 1993.

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BUTTERNUT

Butternut Canker - *Sirrococcus clavigignenti - juglandacearum* Nair, Kostichka and Kuntz

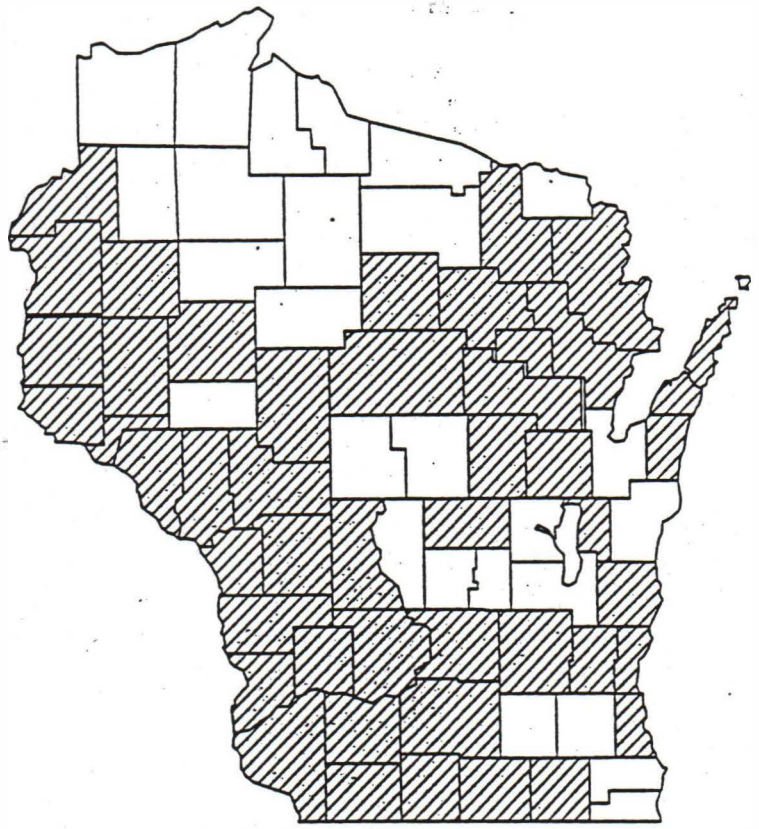

Figure 9. Known county distribution of butternut canker - 1992.

A statewide survey for butternut canker was conducted with the following objectives: determine the incidence and severity of butternut canker by various size classes in known areas of infestation and previously unreported areas; determine whether or not butternut is reproducing in seed or stump sprout form. Eighty-two locations were visited and at each location, all butternuts within a one-acre plot were evaluated for disease incidence and severity; the presence and health of butternut reproduction was also noted. At each site, an additional survey was conducted by walking the property for 1 hour or until 25 butternuts were observed and evaluated.

A total of 1,394 butternuts were evaluated during 1992. Twenty-seven percent of the trees surveyed were dead. Ninety-one percent of the live trees were cankered. Six percent of the trees had basal sprouts; 65 percent of the sprout clumps were cankered. Eighteen percent of the live trees were less than 2 inches in diameter; 75 percent of these small trees were cankered. Apparently resistant individuals were observed but rare. Cankered butternuts were observed in 18 previously unreported counties; confirmation via isolation of *S. clavigigneti-juglandacearum* was obtained for 15 of the 18 counties. Butternut canker is now widely distributed throughout Wisconsin (Figure 9). Regeneration was encountered only occasionally and primarily in disturbed areas such as roadways, pastured fields, trail edges, heavily logged woods and pond shorelines. Efforts are underway to develop management guidelines for butternut that will include conservation practices for healthy butternut and regeneration guidelines to enhance the potential of butternut as a component within a stand.